

REMARKS

Status of the Application

Claims 1-10 are pending and stand rejected. Claim 1 has been amended to more particularly point out the claimed invention and finds support in the as-filed application at least at, for example, p. 11, ll. 9-21 and p. 13, l. 13 – p. 14, l. 8. No new matter has been added to the present application. In view of the foregoing amendments and the following remarks, Applicants respectfully request reconsideration of the present application and a Notice of Allowance.

Claim Objection

Claim 1 has been amended to correct the informality noted by the Examiner in the present Official Action. Accordingly, Applicants respectfully request withdrawal of the objection to claim 1.

Claim Rejections – 35 U.S.C. § 102(b)

Claims 1-4 and 6-10 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Pat. No. 5,761,040 (Iwasa). In light of the foregoing amendment, Applicants respectfully traverse the Examiner's rejection because claims 1 and 7 include features that are not disclosed by Iwasa, namely, and as represented by claim 1:

A semiconductor device comprising:

- a plurality of semiconductor elements arranged on a substrate;
- a main current electrode, which is formed by a piece of metal, arranged near said plurality of semiconductor elements and vertically apart from the surface of the substrate, and

- a case surrounding said plurality of semiconductor elements, ...*
wherein both ends of said main current electrode are supported by said case. (Emphasis added.)

Claim 7 similarly recites “wherein said metal member bridges from one end of the substrate to an opposite end of the substrate *by using said case without directly contacting said substrate.*” (Emphasis added.) Thus, Applicants respectfully traverse the rejection because Iwasa fails to disclose a “*case surrounding said plurality of semiconductor elements,*” wherein “*both ends of said main current electrode is supported by said case,*” or a

metal member that “bridges from one end of the substrate to an opposite end of the substrate *by using said case without directly contacting said substrate*” as claimed.

In the claimed semiconductor device, a main current electrode is supported by a case, instead of by the substrate. As a result, the substrate and semiconductor elements on the substrate may be exposed to only small amounts of physical stresses that may be present on the main current electrode. In contrast, the prior art main electrodes M1 and M2 illustrated in Figs. 15 and 16 of Iwasa are *directly fixed to insulating substrate BS* and are not supported by the case CS. For example, Iwasa explains the existence of “a reliable joint between main electrodes M1 and M2 and the circuit pattern of the insulating substrate BS *which are in contact with each other.*” Col. 2, ll. 13-15. Iwasa, while noting that the main electrodes M1 and M2 “protrude through the upper portion of resin case CS,” does not disclose *supporting both ends* of the main electrodes M1 and M2 with resin case CS. Col. 1, l. 24.

Accordingly, Iwasa fails to disclose a “*case surrounding said plurality of semiconductor elements,*” wherein “*both ends of said main current electrode is supported by said case,*” or a metal member that “bridges from one end of the substrate to an opposite end of the substrate *by using said case without directly contacting said substrate*” as claimed. Because Iwasa does not recite all the limitations of claims 1, as amended, and 7, Applicants respectfully submit that Iwasa does not anticipate claim 1 or 7. As claims 2-4 and 6 ultimately depend from claim 1, and as claims 8-10 ultimately depend from claim 7, Applicants respectfully submit that claims 2-4, 6 and 8-10 are also not anticipated by Iwasa for the reasons explained above.

Claim Rejections – 35 U.S.C. § 103(a)

Claim 5 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Iwasa and U.S. Pat. No. 5,646,445 (Masumoto), and further in view of U.S. Pat. No. 5,086,337 (Noro). Applicants note that the Examiner rejected claim 5 “as being unpatentable “over [Iwasa] and [Masumoto] as applied to claim 4 above, and further in view of [Noro].” (May 6, 2004 Official Action, p. 5.) (Emphasis added.) As respectfully noted in the Applicant’s response dated August 2, 2004, Masumoto was not used in the Examiner’s 35 U.S.C. § 102(b) rejection of claim 4. Nevertheless, Applicants address Masumoto herein solely to expedite examination of the present application.

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REPLY FILED UNDER EXPEDITED
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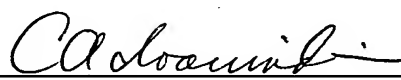
Applicants respectfully traverse the Examiner's rejection of claim 5. As discussed above concerning newly amended claim 1, Iwasa fails to disclose a "*case surrounding said plurality of semiconductor elements,*" wherein "*both ends of said main current electrode is supported by said case*" as claimed. Applicants respectfully submit that both Masumoto and Noro, taken alone or in combination, fail to cure the deficiencies of Iwasa. Specifically, both references appear to be devoid of teachings that would suggest the subject matter of claim 5 in the context of a semiconductor device having a "*case surrounding said plurality of semiconductor elements,*" wherein "*both ends of said main current electrode is supported by said case,*" as is the case in independent claim 1, from which claim 5 ultimately depends. Accordingly, Applicants respectfully submit that claim 5 patentably defines over Iwasa in view of Masumoto and/or Noro, taken alone or in combination.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that the pending claims patentably define over the prior art. Accordingly, a Notice of Allowance are respectfully requested. In the event that the Examiner believes that the present application is not allowable for any reason, the Examiner is encouraged to contact the undersigned attorney to discuss resolution of any remaining issues.

Respectfully submitted,

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